

Subject : Digital Computer Design & Computer Organization

Day : Wednesday
Date : 01/06/2016



Time : 02.00 PM TO 05.00 PM
Max Marks : 80 Total Pages : 1

N.B.:

- 1) Attempt **ANY FIVE** questions from Section – I and attempt **ANY TWO** questions from Section – II.
- 2) Answers to both the sections should be written in the **SAME** answer book.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

- Q.1** Discuss 3 to 8 line decoder in detail. [10]
- Q.2** Explain instruction formats in detail. [10]
- Q.3** What is the use of interrupt? Explain input and output interrupts. [10]
- Q.4** Discuss register transfer in detail. [10]
- Q.5** Explain instruction cycle with the help of flowchart. [10]
- Q.6** Discuss various types of computer languages. [10]
- Q.7** Write short notes on **ANY TWO** of the following: [10]
- a) Logic gates
 - b) Subroutines
 - c) Flip-flops

SECTION – II

- Q.8** a) Simplify the following equations using Boolean Algebra: [08]
- i) $AB + A(CD + CD')$
 - ii) $A'B + ABC' + ABC$
- b) Solve the following: [07]
- i) Find 2's complement of 11111110.
 - ii) Find 9' complement of 234567.
- Q.9** a) What is the shift register? Discuss bi-directional shift register with parallel load. [10]
- b) Describe the structure of assembly language program. [05]
- Q.10** What is binary counter? Illustrate structure and functioning of four bit synchronous binary counter. [15]

* * * *